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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/782,971	02/23/2004	Mineyoshi Masuda	NITT.0195	7715

7590 09/30/2008
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EXAMINER

PHAN, TUANKHANH D

ART UNIT	PAPER NUMBER
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2163

MAIL DATE	DELIVERY MODE
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09/30/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/782,971	Applicant(s) MASUDA ET AL.	
	Examiner TUAN-KHANH PHAN	Art Unit 2163	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 July 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14, 16 and 24-29 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14, 16 and 24-29 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

This Office Action is in response to the Request for Continued Examination, filed on 07/29/2008. Claims 15 and 17-23 have been cancelled. Claims 1-14, 16 and 24-29 (newly added) are pending.

Response to Arguments

Applicant's arguments filed 07/29/2008 have been fully considered but they are not persuasive.

Applicant argues that none of cited prior art references teaches or suggests such a step of "setting, by said one client, an allocation of requests transmissible out to a newly added server at an amount smaller than amounts set for the remaining servers in the server cluster, right after detecting an increase in the number of servers" as the present invention. In contrast, Chellis has a resource allocator 30 (rather than a "client") execute a reallocation request by a consumer 20 for migrating a number of users allocated to servers/rescores 25. The resource allocator 30 is set between users and servers (Figs. 1-2). Chellis does not allow the client/customer to set an allocation of requests transmissible out to a newly added server as the present invention. In Chellis, the adjustable rules are implemented by the resource allocator 30. If the resource allocator 30 is the receiving end thus situating at the server sited as asserted by the Examiner (p. 3, lines 8-9 of the outstanding Office Action), the resource allocator 30 is not on the client side, such that Chellis does not allow the client/customer to set an allocation of requests transmissible out to a newly added server as the present

Art Unit: 2163

invention. As known to one skilled in the art, a service provider will not allow one customer to allocated the shared resources available to all customers, in order to maintain control and management of its resources as well as and data security.

Response. (1) Applicant discloses that the client transmits out a request, and hence changes the configuration. This clearly shows, as pointed out in the prior Action, that the client, by itself does not change the configuration, but rather the receiving end is the one affectively changes the configuration. Equivalently, Chellis has a resource allocator, as an application that can be implemented either end or in the middle (col. 9, lines 9-11). (2) Setting an allocation of request transmissible out to a newly added server at a value smaller that that set for each of the remaining servers in the cluster by client. By the adjusting rule (col. 5, lines 1-17), disclosed by Chellis, it allows request of client to shift **some** load from one resource to another (col. 14, line 49) in according with the comparison so that a greater or lesser number of resource can be allocated. (col. 11, lines 6-10). (3) Also a resource allocator can be incorporated with client side or server side to effectively utilize its functions locally, remotely, or centrally. As known to one skilled in the art, a service provider would allow one customer to select/allocate the shared resources available to all customers (e.g. sending printing requests to different printers when there exist additional printers available with more capacity). Thus, Applicant's argument is not persuasive.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

Art Unit: 2163

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5 and 7-1423 are rejected under 35 U.S.C. 102(b) as being anticipated by Chellis et al. (US Pat. 6,901,446), hereinafter Chellis.

Regarding claim 1, Chellis teaches a load distribution method adapted-by a client-server system including a plurality of clients and a server cluster (abstract), said server cluster including a plurality of servers each used for processing requests made by said clients and allows a number of said servers to be changed dynamically, comprising the steps of: (i.e. **a new server may come online and dynamically allocating resource provided**, col. 5, lines 20-49):

detecting, by one of clients, a change of the number of servers forming said server cluster (i.e. **resource instance table for the availability of the new resources**, col. 5, lines 25-30);

setting, by said one client, an allocation of requests transmissible out to a newly added server at an amount smaller than amount set for the remaining servers in the server cluster, right after detecting an increase in the number of servers (col. 9, line 9; **allowing to allocate of requests transmissible out to newly resource at some amount is equivalent to smaller amount against the original resource; i.e. reallocation request to migrate a number of users from one or more servers to the new server is a variation of the requests transmissible out to a newly added server**, col. 5, lines 40-46); and

Art Unit: 2163

transmitting out requests to said servers on the basis of said set allocation, if said increase in the number of server is detected; and (col. 5, lines 40-46; col. 9, line 9) receiving, by said one client, responses to the request from said servers (col. 9, line 9).

Regarding claim 2, Chellis teaches a load distribution method according to claim 1, further comprising a step of increasing, by said one client, said amount of allocation of request transmissible out to said newly added server with the lapse of time (i.e. **resource value allocation is changing over a time period**, col. 7, lines 25-30).

Regarding claim 3, Chellis a load distribution method according to claim 1, wherein said detection of an increase in said number of said servers is used as a trigger of each of said clients to set said allocation of requests transmissible out to said newly added server at said amount smaller than said amount set for each of said remaining servers (e.g. **the excessive 45-client is smaller than the capacity 100 of the new server**; col. 5, lines 36-45; col. 8, lines 38-45; col. 9, line 9).

Regarding claim 4, Chellis teaches a load distribution method according to claim 1, further comprising the steps of: acquiring, by said one client, information on a performance of said newly added server, if said newly added server is detected; and setting, by said one client, said allocation of requests transmissible out to said newly added server on the basis of said acquired information (col. 11, lines 20-25; col. 19, lines 38-47).

Regarding claim 5, Chellis teaches a load distribution method according to claim 1, further comprising the steps: acquiring performance information of said newly added

Art Unit: 2163

server; and setting, by said one client, said allocation of requests transmissible out to said newly added server on the basis of said acquired information (i.e. **allocation status and the availability of a resource is based on the acquired state information**, col. 4, lines 15-23).

Regarding claim 7, Chellis teaches a load distribution method according to claim 1 wherein: said client-server system has a management server for managing the number of servers composing said server cluster (col. 10, lines 5-12); and a notice received from said management server as a notice of an increase in said number of said servers is used as a trigger of each of said clients to set said allocation of requests transmissible out to said newly added server at said amount smaller than said amount set for said remaining servers (col. 10, lines 5-12; col. 9, line 9).

Regarding claim 8, Chellis teaches a load distribution method according to claim 1, wherein: said client-server system has a management server, and the method further comprising the steps of:

acquiring, by said one client, information on a performance of each of said servers (col. 11, lines 20-25; col. 19, lines 38-47);

setting, by said one client, said allocation of requests transmissible out to said newly added server on the basis of said acquired information (col. 5, lines 40-46).

Regarding claim 9, Chellis teaches a load distribution method according to claim 1, further comprising a step of: setting, by said one client, said allocation of requests transmissible out to said newly added server by setting the number of connections for communications with said servers (col. 21, lines 15-25).

Art Unit: 2163

Regarding claim 10, Chellis teaches a load distribution method according to claim 1, further comprising a step of: setting, by said one client, an allocation of requests transmissible out to each of said servers by changing quotas each set for every individual one of said servers (col. 3, lines 35-45) as an allotment of requests transmissible out to said individual server (col. 3, lines 43-49).

Regarding claim 11, Chellis teaches a load distribution method according to claim 10 wherein: said client-server system has storage apparatus connected to said servers (col. 13, lines 50-59), and the method further comprising the steps of: holding, by said servers, directory information indicating storage locations of files stored in said storage apparatus (col. 13, lines 50-59); and setting, by said one client, said allocation of requests transmissible out to each of said servers by changing quotas each provided for every individual one of said servers as an allotment of said directory information stored in said individual server where said allotment of said directory information storable in said individual server represents an allotment of requests transmissible out to said individual server (i.e. resource tree, col. 13, lines 45-62).

Regarding claims 12 and 27, see the discussions of the claim 1 above.

Regarding claim 13, Chellis teaches a client-server system according to claim 12 wherein: each of said clients has an allotment-holding unit for holding an allotment set for every individual one of said servers (i.e. **allotment indication of 10 users per server is given as an example**, col. 5, lines 30-40) as an allotment of requests transmissible out to said individual server; and said allocation setting unit sets an allocation of requests transmissible out to each of said servers by changing quotas each

Art Unit: 2163

set for every individual one of said servers as said allotment of requests transmissible out to said individual server (col. 5, lines 30-40).

Regarding claim 14, Chellis teaches a client-server system according to claim 13, further comprising storage apparatus connected to said servers wherein: each of said servers is provided with a directory- information-holding unit for holding directory information indicating storage locations of files stored in said storage apparatus (col. 13, lines 50-59); said clients are provided with a management server for holding quotas each provided for every individual one of said servers as an allotment of said directory information storable in said individual server (col. 13, lines 50-59); and said allocation setting unit sets said allocation of requests transmissible out to each of said servers by changing said quotas each provided for every individual one of said servers as an allotment of said directory information stored in said individual server (col. 5, lines 40-46).

Regarding claim 24, Chellis a client-server system according to claim 12, further comprising a management server for managing the number of servers: wherein the clients receives a notice of an increase in said number of said servers is used as a trigger of each of said clients to set said allocation of requests transmissible out to said newly added server at said amount smaller than amount set for the remaining servers (col. 21, lines 15-25; col. 9, line 9).

Regarding claim 25, see the discussion of claim 4 above.

Regarding claim 28, see the discussion of claim 2 above.

Regarding claim 16, Chellis teaches a load distribution method according to claim 2 (see the discussion of the claim 2 above), wherein each of said clients sets said allocation of requests transmissible out to said newly added server by setting the number of connections for communications with said servers (i.e. **indication of 10 connections per server is given as an example**, col. 5, lines 30-40).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6, 26 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chellis as in view of Gerszberg et al. (US Pat. 6,385,693).

Regarding claims 6, 26 and 29, Chellis teaches a load distribution method according to claim 5, wherein said information on a state of said newly added server and said amounts of allocation of requests set for the servers but does not explicitly include at least a cache hit rate, a cache utilization ratio or the number of requests each waiting for a processing turn. However, in the same field of load distribution added server, Gerszberg et al. disclose server includes cache hit rate to address reallocation of server traffic and load distribution (col. 10, lines 43-61). It would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the cache hit rate and utilization taught by Gerszberg et al. into the server

Art Unit: 2163

load distribution taught by Chellis to maintain uniform, fast and efficient network performance (Gerszberg et al., col. 10, lines 50-52).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TUAN-KHANH PHAN whose telephone number is (571)270-3047. The examiner can normally be reached on 4/5/9.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on 571-272-1834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TKP

/Wilson Lee/
Primary Examiner, Art Unit 2163